RTMENT OF THE INTERIOR
Land Management

NEW MEXICO WILDERNESS STUDY REPORT

Statewide Overview

September 1991

NEW MEXICO
WILDERNESS STUDY REPORT

Department of the Interior
Bureau of Land Management

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RECORD OF DECISION

THE SECRETARY OF THE INTERIOR
WASHINGTON

RECORD OF DECISION

The following are the wilderness recommendations for 50 wilderness study areas (WSAs) in the State of New Mexico. These recommendations were developed from the findings of a 15-year wilderness study process by the Department of the Interior and Bureau of Land Management. The wilderness studies considered each area's resource values, present and projected future uses of the areas, public input, the manageability of the areas as wilderness, the environmental consequences of designating or not designating the areas as wilderness, and mineral surveys prepared by the U.S. Geological Survey and U.S. Bureau of Mines.

Based on our review of those studies, I have concluded that 487,186 acres within 23 study areas should be designated as part of the National Wilderness Preservation System and that 420,400 acres within 39 study areas should be released from wilderness study for uses other than wilderness. The acreage recommendations for each WSA, with which I concur, are listed in the following table. The Wilderness Study Report accompanying this decision includes a detailed discussion of the recommendations and maps showing the boundaries of each area.

Secretary of the Interior

AUG 19 1991

Date

New Mexico Wilderness Recommendation

Table 1

The following are the wilderness recommendations for 48 wilderness study areas and 2 instant study areas in the State of New Mexico. These recommendations are the culmination of the Bureau of Land Management's (BLM's) wilderness study process. The wilderness studies considered each area's resource values, present and projected future uses, public input, the manageability of the area as wilderness, the environmental consequences of designating or not designating the area wilderness, and mineral surveys prepared by the U.S. Geological Survey and U.S. Bureau of Mines. Based on my review of those studies, I have concluded that 23 WSAs, totalling 487,186 acres of BLM land, should be designated as part of the National Wilderness Preservation System and that 420,400 acres within 39 areas should be released for uses other than wilderness. A detailed discussion of the recommendations is included in the attached wilderness study report and the recommendations are depicted on maps included in that report. Five final environmental impact statements covering 49 areas and 1 suitability report for the Mathers Instant Study Area accompany this decision. The acreage recommendations for each study area are as follows:

WSA Name	WSA Number	Study	Acres Recommended Wilderness	Acres not Recommended Wilderness
Ah-shi-sle-pah	NM-010-009	Statewide	0	6,563
Rio Chama	NM-010-059	Statewide	5,918	6,753
Sabinoso	NM-010-055	Statewide	0	15,760
San Antonio	NM-010-035	Statewide	0	7,050
Cabezon	NM-010-022	Statewide	8,159	0
Chamisa	NM-010-021	Statewide	15,758	844
Empedrado	NM-010-063	Statewide	9,007	0
Ignacio Chavez	NM-010-020	Statewide	33,609	0
La Lena	NM-010-063A	Statewide	10,438	0
Manzano (202)	NM-010-092	Statewide	881	0
Ojito	NM-010-024	Statewide	10,903	0
Petaca Pinta	NM-020-014	Statewide	10,631	1,037
Antelope	NM-020-053	Statewide	0	20,710
Continental Divide	NM-020-044	Statewide	37,599	31,162
Devil's Backbone	NM-020-047	Statewide	0	8,904
Eagle Peak	NM-020-019	Statewide	0	43,960
Horse Mountain	NM-020-043	Statewide	4,432	600
Jornada del Muerto	NM-020-055	Statewide	31,147	0
Mesita Blanca	NM-020-018	Statewide	0	19,414
Presilla	NM-020-037	Statewide	0	8,680
Sierra de las Canas	NM-020-038	Statewide	12,798	40
Sierra Ladrones	NM-020-016	Statewide	31,804	13,504
Stallion	NM-020-040	Statewide	0	24,238

Veranito	NM-020-035	Statewide	0	7,206

WSA Name	WSA Number	Study	Acres Recommended Wilderness	Acres not Recommended Wilderness
Aden Lava Flow	NM-030-053	Statewide	25,287	0
Alamo Hueco Mountains	NM-030-038	Statewide	0	16,264
Apache Box(202)	AZ-040-076	Arizona Mohave	0	932
Big Hatchet Mountains	NM-030-035	Statewide	45,374	20,498
Blue Creek	NM-030-026	Statewide	0	14,896
Cedar Mountains	NM-030-042	Statewide	0	14,911
Cooke's Range	NM-030-031	Statewide	0	19,608
Cowboy Spring	NM-030-007	Statewide	6,699	0
Florida Mountains	NM-030-034	Statewide	0	22,336
Gila Lower Box	NM-030-023	Statewide	5,835	2,720
Guadalupe Canyon	NM-ISA-001	Coronado National Forest	0	4,145
Las Uvas Mountains	NM-030-065	Statewide	0	11,067
Organ Mountains	NM-030-074	Statewide	7,283	0
Peloncillo Mountains	AZ-040-060	Safford District	0	4,061
Robledo Mountains	NM-030-063	Statewide	0	12,946
West Potrillo/Mt. Riley	NM-030-052	Statewide	148,540	8,645
Brokeoff Mountains	NM-030-112	Statewide	0	31,606
Culp Canyon	NM-030-152	Statewide	0	10,937
Carrizozo Lava Flow/	NM-060-109			
Little Black Peak	NM-060-110	Statewide	25,084	1,075
Mathers	NM-ISA-003	Mathers Suitability Report	0	362
Devil's Den Canyon (202)	NM-060-145	Lincoln National Forest	0	320
Lonesome Ridge (202)	NM-060-801	Lincoln National Forest	0	3,505
McKittrick Canyon (202)		Lincoln National Forest	0	200
Mudgetts (202)	NM-060-819	Statewide	0	2,941
TOTAL ACRES BLM NEW MEXICO			487,186	420,400

WILDERNESS STUDY OVERVIEW

WILDERNESS STUDY OVERVIEW

THE WILDERNESS REVIEW

This report culminates a 14-year effort by the Department of the Interior, Bureau of Land Management (BLM), to complete a wilderness review of public land in New Mexico as required by the Federal Land Policy and Management Act (FLPMA) of 1976. Over 12 million acres of BLM land in New Mexico were inventoried to assess their wilderness characteristics. The BLM State Director in New Mexico determined that 1.2 million acres of this BLM land, in 57 individual areas, met the minimum wilderness criteria and were designated as wilderness study areas (WSAs).

The designated WSAs contain 5,000 acres or more of contiguous BLM land or are of sufficient size to make practical their preservation and use in an unimpaired condition; generally appear to have been affected primarily by the forces of nature; and provide outstanding opportunities for solitude or a primitive and unconfined form of recreation. In addition, the WSAs may contain supplemental values consisting of ecological, geological, or other features of scientific, educational, scenic, or historic value. The primary goal of the wilderness study process was to recommend wilderness designation those areas where wilderness was determined to be the most appropriate use of the land and its resources.

In 1984, Congress designated the Bisti and De-na-zin Wilderness Areas, totalling 26,400 acres of BLM land in New Mexico. In 1987, Congress designated the Cebolla and West Malpais Wilderness Areas, totalling 102,500 acres of BLM land, and designated as a WSA the Chain of Craters, totalling 18,300 acres of BLM land. This legislation also transferred 100,000 acres of the El Malpais Instant Study Area (ISA) to the National Park Service (NPS).

The wilderness designation of four areas and transfer of land in the El Malpais area to the NPS reduced the original 1.2 million acres of WSAs to approximately 925,000 acres in 51 areas. The wilderness recommendation for the Congressionally designated Chain of Craters WSA containing 18,300 acres will be reported in 1992 following completion of the wilderness study. The recommendation for the 362-acre Mathers Instant Study Area (ISA) was originally transmitted to the Congress on April 26, 1985. As there has been no action on this legislation, the Mathers ISA is being resubmitted as part of this Statewide package. Therefore, this report includes recommendations and rationales for 50 study areas, totalling 907,586 acres of BLM land in New Mexico. The total study acreage includes 4,788 acres of public land located outside the WSA boundaries but recommended suitable for wilderness designation. The completion dates and study acreage for each of the five wilderness studies completed for BLM WSAs in New Mexico are displayed on Table 1.

Instant Study Area

This report includes the final wilderness recommendation for the Guadalupe Canyon ISA and the Mathers ISA. The Guadalupe Canyon was designated an "Outstanding Natural Area (ONA)" by the New Mexico BLM State Director on August 13, 1971. Mathers was designated a "Natural Area" by the New Mexico BLM State Director on August 27,1970. In accordance with Section 603 (a) of FLPMA, the Guadalupe Canyon ONA and the Mathers Natural Area were designated ISAs.

The Guadalupe Canyon ISA contains the 3,692-acre Guadalupe Canyon ONA and 454 acres of adjacent split-estate land (Federal surface/non-Federal subsurface ownership). The ISA was studied for wilderness suitability in a joint study with the Coronado

Table 1: List of Wilderness Studies

Name of Study	Draft EIS Filed	Final EIS Filed	Study Acreage
New Mexico Statewide	9/86	1/88	949,919
Arizona Mohave	9/87	2/89	932
Safford District [1]	6/83	4/87	4,061
Coronado National Forest	12/82	7/86	4,146
Lincoln National Forest	7/85	9/86	4,025

[1] The Peloncillo Mountains WSA is located in New Mexico and Arizona. Total acreage of the WSA in both states is 12,317 acres.

National Forest Bunk Robinson WSA and the BLM Baker Canyon WSA managed by the Safford District, Arizona. The environmental impact statement (EIS) for the Coronado National Forest Plan was completed in July 1986. The Guadalupe Canyon ISA is not recommended for wilderness designation. This recommendation is based on the nonsuitable recommendation for the contiguous U.S. Forest Service administered Bunk Robinson WSA. While the Guadalupe Canyon ISA contains high quality wilderness values, BLM believes management of the area as wilderness is contingent upon designating the contiguous Bunk Robinson WSA wilderness.

The Mathers ISA covers the entire 362-acre Mathers Natural Area. During the review, BLM determined the ISA was of insufficient size for wilderness preservation, was bissected by a major improved road, and lacked outstanding opportunities for solitude and primitive recreation. The Mathers Suitability Report is included as Appendix 1.

Wilderness Study Areas Less Than 5,000 Acres In Size

This report includes a category of WSAs that have wilderness characteristics only when combined with contiguous National Park Service land in New Mexico or when combined with the contiguous U.S. Forest Service land in New Mexico. The BLM land was selected for wilderness study under the planning authority of Section 202 of FLPMA. The six WSAs studied under this authority, including the recommendation, lead agency in the study process, and name of the study are displayed on Table 2.

Generally, the Section 202 WSAs in New Mexico were studied using the same process used for the other New Mexico WSAs. The value of each area as wilderness was compared to the multiple-use value of the area for other purposes. An EIS was prepared. Since the Section 202 WSAs depend on the lands of another agency to qualify for wilderness consideration, that agency's management plans and policies were an important factor in determining if the area was recommended for wilderness designation.

In all but one of the six Section 202 WSAs, the recommendation is not to designate the area as wilderness. These WSAs were either contiguous to U.S. Forest Service WSAs recommended nonsuitable for wilderness designation or, in the case of the Mudgetts WSA, had high potential for the occurrence of oil and gas resources. The recommendation for the Manzano WSA is to designate the entire area as wilderness and to add it to the Cibola National Forest's Manzano Mountain Wilderness. The

WSA represents a natural extension to the existing 36,785-acre Manzano Mountain Wilderness, and management by one agency will reduce overall administrative costs.

New Mexico WSA Included In Arizona Wilderness Study

The Peloncillo Mountains WSA, studied under the authority of Section 603 of FLPMA, straddles the Arizona and New Mexico state line. The Peloncillo Mountains WSA totals 12,317 acres of BLM land, with 4,061 acres in New Mexico and the remainder in Arizona. The WSA was studied as part of the Safford District Wilderness EIS. In November of 1990, 19,650 acres of the Peloncillo Mountains were designated as wilderness. This included the entire Peloncillo WSA in Arizona. Only those acres located in New Mexico are now being officially reported in this document.

New Mexico Wilderness Recommendations

The Secretary of the Interior's recommendations are to designate 487,186 acres as wilderness and release 420,400 acres to other multiple-use activities. This recommendation will:

- Establish 22 new wilderness units and add acreage to 1 existing wilderness unit spanning a wide variety of New Mexico's landforms, ecosystems, and other natural features.

- Improve the geographic distribution of wilderness areas and complement existing areas of Federal wilderness.

- Increase nationwide ecosystem diversity.

- Ensure protection for the remaining areas in New Mexico which provide outstanding opportunities for the growing population to experience solitude or a primitive and unconfined recreation experience.

At the same time, this recommendation will release all of 27 units and parts of 12 others having potential for mineral and energy resources, nonwilderness recreation, utility corridors, and other land uses. The lands not recommended for wilderness also

Table 2: Section 202 Wilderness Studies

WSA Name	WSA Number	Acres Recommended Wilderness	Acres Recommended Not Wilderness	Lead Agency/Study Name
Apache Box	AZ-040-076	0	932	BLM/Arizona Mohave
Lonesome Ridge	NM-060-801	0	3,505	U.S. Forest Service/ Lincoln National Forest
Devil's Den Canyon	NM-060-145	0	320	U.S. Forest Service/ Lincoln National Forest
McKittrick Canyon	NM-060-146	0	200	U.S. Forest Service/ Lincoln National Forest
Mudgetts	NM-060-819	0	2,941	BLM/New Mexico Statewide
Manzano	NM-010-092	881	0	BLM/New Mexico Statewide

generally have lower quality wilderness values which would not enhance the National Wilderness Preservation System (NWPS) or were determined by BLM to be unmanageable as wilderness due to land status or existing private rights in the area. Management of nonwilderness areas will be consistent with multiple-use objectives as prescribed in resource management plans (RMPs).

Reviewers commenting on the EISs included national and Statewide environmental organizations, State agencies, local governments and Indian Tribes, industry groups, sportsmen, recreational interests, ranchers, utility companies, as well as concerned citizens. A special review was provided for the New Mexico Governor to ensure the recommendations were consistent with State plans and policies.

The Secretary of the Interior is recommending wilderness designation for those areas possessing wilderness values and multiple resource benefits which are capable of balancing the benefits which could be foregone as a result of wilderness designation. In addition, all areas recommended for wilderness designation were determined by the BLM to be capable of being managed as wilderness over the long-term.

KEY ISSUES AND MAJOR CONCLUSIONS

On a Statewide basis, the BLM identified three resource issues. These issues and the potential impact resulting from implementation of the recommendations of the Secretary of the Interior are as follows.

Impacts On Wilderness Values

Wilderness values would be maintained on 487,186 acres in 23 individual areas. Improvement in the quality of naturalness would result from closure of approximately 200 miles of existing vehicle routes. Solitude and primitive recreation opportunities would be maintained on 54 percent of the acreage under wilderness review. Recreation opportunities include rafting, backpacking, rock climbing, hunting, fishing, and nature photography.

Archeological sites, raptor habitat, bighorn sheep habitat, unique vegetation communities, and opportunities to study melanistic species would be preserved. There would be 17 new ecosystems added to the NWPS. The ecosystems within the Chihuahuan Desert Province, Colorado Plateau Province, and Mexican Highlands Shrub Steppe Province would be the first of their type to be included in the system.

Wilderness values, including naturalness, solitude, and recreation opportunities, would be diminished on 420,400 acres not recommended for wilderness designation. This would result from energy and mineral exploration and development, intensive livestock management, and off-road vehicle use.

Impacts on Mineral and Energy Exploration and Development

When the wilderness studies were conducted in New Mexico, BLM Geologists used the best available mineral resource information to evaluate impacts. Since completion of these wilderness studies, the U.S. Geological Survey (USGS) and U.S. Bureau of Mines completed their mineral surveys in each of the WSAs recommended for wilderness designation and conducted a literature search on all the remaining areas. This mineral resource data either confirmed BLM's assessment of mineral resource potential or strengthened the rationales against wilderness designation where mineral resource potential was a factor. Statewide impacts did not change. However, in order to provide the decision maker with the most current information about mineral resource potential, the wilderness study reports for each WSA have been updated.

The mineral resource potential for each WSA and the differences that were identified in the USGS and U.S. Bureau of Mines data are displayed in Appendix 2.

Because all 23 WSAs recommended for wilderness designation in this report were evaluated in the New Mexico Statewide Wilderness Study, information obtained from that study is used in describing mineral resource impacts.

The recommendation would withdraw approximately 0.3 of 1 percent of New Mexico's known petroleum provinces and approximately 1 percent of other areas with high to moderate potential for oil and gas resources. Although no existing geothermal or coal leases would be encumbered, about 0.5 of 1 percent of the most favorable geothermal and coal resource areas would be withdrawn.

Withdrawal of 1.5 to 2.0 percent of New Mexico's bismuth, manganese, lead, tellurium, and zinc mineral resource areas and approximately 1 percent of New Mexico's copper, molybdenum, and tungsten mineral resource areas would occur under the recommendation.

Impacts to nonmetallic mineral resources will be limited to fluorite and barite due to the relative abundance and remote locations of the majority of the other industrial minerals found in the WSAs. The recommendation would withdraw 1.5 percent and 3.3 percent of New Mexico's fluorite and barite resources, respectively. The bulk of New Mexico's fluorite and barite resources are currently withdrawn and lie within the boundaries of the White Sands Missile Range. Although New Mexico's known fluorite deposits form a substantial portion of the United States reserve base, presently identified barite resources in New Mexico are not especially impressive. The barite deposits in New Mexico tend to occur along the Rio Grande rift zone in small vein and replacement deposits, while more important deposits in Nevada and California occur as massive bedded sedimentary deposits. The recommendation may impact local opportunities to develop economic fluorite and barite resources, but no impacts of a Statewide or National scale are anticipated.

Impacts on Livestock Grazing Use Levels

Less than 1 percent of the 64 million acres of land in the State used for livestock grazing would be impacted. Because this percentage is considered low, no significant Statewide impacts are anticipated. There will be no change in livestock grazing use levels simply because an area is designated wilderness. The biggest impact would be inconvenience to the livestock operator because vehicle use on approximately 200 miles of vehicle routes would be eliminated or sharply curtailed. Of this amount, it is estimated that approximately 65 miles of these vehicle routes are specifically used by livestock operators to drive vehicles to rangeland developments, to distribute salt or feed supplement, or to check livestock distribution and condition.

SUMMARY OF PUBLIC INPUT

The public was invited to participate throughout the wilderness study process. Opportunities for public participation were provided through:

- Workshops to consider criteria and to review preliminary maps during the Inventory Phase of the Wilderness Review Process.
- Hearings throughout the State on inventory findings.
- Review of draft and final wilderness EISs.
- Hearings where testimony was taken on draft wilderness EISs.

Public input was received on all sides of the wilderness issue and focused both on site-specific con-

cerns as well as broader, philosophical issues. It is clear from comments received that the public generally supports wilderness designations in New Mexico. It is not surprising, however, that groups and individuals are sharply divided over how much wilderness should be designated, which areas are appropriate for designation, and whether inclusion in the NWPS is the best means available to protect natural values and open space.

Involvement During the Wilderness Inventory

From March 31 through July 21, 1980, comments on the Wilderness Study Proposals were solicited in a variety of ways. Approximately 3,000 copies of *New Mexico Wilderness Study Proposals* were distributed throughout the State; the back cover of this document contained a postage-paid comment sheet. Open houses to explain the BLM's proposals were held in eight selected locations throughout the State in early April. Public meetings to solicit oral comments were also held in ten selected locations in May and June. Numerous personal contacts were made with individuals, special interest groups, and State and local government officials. In addition, BLM encouraged written comments as the primary input method.

The BLM's effort resulted in the reception of about 700 personal letters, 700 form letters, and 2,300 coupons. These coupons were attached to a poster which was distributed nationally by a special interest group. People were asked to remove the coupon, which had a standard printed message, sign it, and send it to the appropriate State Director.

All comments, written and oral, were analyzed by an inter-district team in the New Mexico State Office in Santa Fe. Oral comments were transcribed and analyzed with the written input. The analysis did not involve vote counting. Comments were analyzed for the information they contained relevant to wilderness characteristics of specific areas. Large numbers of form letters or petitions which merely supported or opposed wilderness study status, without supporting reasons, were of little use. However, a single letter or testimony which offered new information on the wilderness characteristics of a particular area could have resulted in a change in the final decision.

Information on other land uses or conflicts with wilderness were not considered until the study phase of the Wilderness Review Process. This type of information had no bearing on the identification of WSAs, but was retained for future use.

Following the analysis, comments providing new information were field-checked to verify their accuracy. Once verified, this new information was incorporated into the permanent documentation file of the appropriate area before a final decision was made.

Public comments were used to help the decision maker determine whether or not an area had wilderness characteristics. The final wilderness study decision was based not on the comments themselves, but on whether or not an area had wilderness characteristics.

Involvement During the Wilderness Study

The identification of issues began in 1980 when BLM formulated the New Mexico Wilderness Study Area Decisions. Issues were further refined as part of each Wilderness EIS scoping process. The involvement process for each of the wilderness study efforts is summarized on the following pages.

New Mexico Statewide Study

The New Mexico Statewide Wilderness Study included 43 of the 51 WSAs included in this report. Public scoping actions for the Draft EIS were conducted from July through December 1984. Major actions included distribution of information brochures, open house meetings, small group meetings, and discussions with representatives of

various interest groups and agencies. Other actions to inform the public of review and comment opportunities included issuance of news releases, public service announcements, and radio and television interviews.

Brochures describing the proposed issues and alternatives for the Statewide Wilderness EIS were mailed to 3,500 members of the public. The brochures also included invitations to submit written or verbal comments and to attend seven open house meetings. These meetings were held between September 11 and 20, 1984, in Taos, Santa Fe, Albuquerque, Socorro, Las Cruces, and Roswell, New Mexico and El Paso, Texas.

A total of 137 people attended the 7 scoping meetings. The majority of comment at these meetings was general and did not relate specifically to the alternatives and issues to be analyzed. Common general comments were: questions on wilderness analysis and designation procedures; recommendation that all WSAs be designated wilderness; recommendation that no WSAs be designated wilderness; site-specific interests in designation or nondesignation; and disagreement with the acreage listed in BLM's proposed alternatives.

On May 1, 1985, BLM issued for comment a Draft EIS for the New Mexico Statewide Wilderness Study. This document was prepared before the decision was made to study split-estate land (Federal surface/non-Federal Subsurface) and areas less than 5,000 acres in size. Because this decision affected 19 WSAs and added approximately 150,000 acres to the Statewide study, a major revision was necessary. The BLM decided to use comments on the Draft EIS as additional scoping input and to make revisions to the entire Draft EIS. As a result, a Revised Draft EIS was prepared covering all the acreage in all the WSAs in the Statewide Wilderness Study.

The 90-day public comment period on the Draft EIS resulted in 465 responses. This included hearing testimony that was given by 28 respondents. The remaining responses were letters and a few BLM response forms. One petition was received. The New Mexico BLM Wilderness Coalition submitted Alternative W, a proposal for 1.3 million acres of wilderness. A large number of letters in support of Alternative W and in support of specific WSAs appeared to be the result of a write-in campaign initiated by the New Mexico BLM Wilderness Coalition. These letters were individually composed by each respondent and were subsequently not identified or counted as form letters. However, each letter contained almost identical opinions and reasons.

Approximately 90 percent of the respondents commented on the alternatives. A majority (73 percent of the respondents) favored Alternative W. The All Wilderness Alternative was favored by 17 percent of those commenting. Other alternatives were each supported by 1-2 percent of the respondents.

The most frequently used reasons for supporting Alternative W and the All Wilderness Alternative were:

- The nation and New Mexico need more wilderness areas.
- BLM overstated manageability problems in reaching the preferred alternative.
- Designation of additional areas will not adversely impact other uses.
- Mineral and grazing values are low and there would be no major conflicts with wilderness.
- The value of wilderness outweighs the value of other resources or uses.
- Designation of more areas will protect unique ecosystems, wildlife, paleontological, scientific, and scenic values.

Another major reason for supporting more wilderness than the BLM preferred alternative was re-

flected in comments on the adequacy of the analysis. Many respondents said the recommendations were not supported by the analysis. They said the analysis led to a conclusion of suitability for many areas, but the BLM recommended them nonsuitable.

The most frequent reasons given for support of no wilderness or less wilderness than the preferred alternative were:

- The Nation or New Mexico has enough wilderness areas.
- Designation will adversely affect the minerals or livestock industry.
- It will cause adverse impacts on the economy.
- Areas would be difficult to manage.
- Designation would be incompatible with the multiple-use concept.

In addition to comments on alternatives, comments were made on the data and analysis in the Draft EIS. There were 40 respondents that commented on the acceptability of the data included in the EIS; 10 felt the data were satisfactory and 30 said essential data were missing or poor. Those who were dissatisfied with the data emphasized that the minerals and recreation data were weak. The adequacy of the analysis in the EIS was commented on by 70 people; 25 felt the analysis was adequate, and 45 said it was inadequate.

Those who felt the analysis was inadequate gave the following major reasons:

- Analysis seemed adequate but recommendations did not logically follow.
- Areas were unjustifiably recommended nonsuitable for wilderness.
- Value of wilderness was not adequately considered.
- Too much weight was placed on nonwilderness values.
- Need more in-depth analysis.
- Study should have considered split-estate and areas with less than 5,000 acres.
- Manageability is not a justifiable reason to recommend nondesignation.
- BLM recommended only the most outstanding areas.

Comments on the Revised Draft EIS were obtained from the general public, citizens groups, and governmental agencies during the September 2 through December 12, 1986 comment period. During the comment period, oral testimony was also obtained at public hearings held in Santa Fe, Albuquerque, and Las Cruces, New Mexico.

A total of 751 oral and written responses were obtained. Of the 751 responses, 385 respondents commented on alternatives. Two alternatives, which were not evaluated in the Revised Draft EIS, were raised by a significant number of respondents. These alternatives are the New Mexico BLM Wilderness Coalition proposal and the Earth First! proposal. Approximately 48 percent of the respondents who commented on alternatives supported the Wilderness Coalition proposal. This proposal was updated from what was identified during the Draft EIS public comment period and identified approximately 1.8 million acres as suitable for wilderness designation. This acreage exceeded the BLM All Wilderness proposal. In addition to the BLM WSAs, the Wilderness Coalition proposed for wilderness some former BLM inventory units that were not designated as WSAs, five areas originally studied by the U.S. Forest Service, and substantial acreage of State and Federal lands contiguous to the WSAs.

Approximately 16 percent of the respondents who commented on alternatives favored the Earth First! proposal. This proposal identified approximately 5 million acres as suitable for wilderness designation. This proposal included an approach similar to the Wilderness Coalition with additional emphasis on combining WSAs and including land that currently lack natural qualities.

Other comments on alternatives included support by 8 percent of the respondents for the All Wilderness Alternative, support by 26 percent for the No Wilderness Alternative, and support for the Proposed Action by 2 percent of the respondents. There were no comments on the Emphasis on Manageability or Conflict Resolution Alternatives.

Comments on the adequacy of the analysis and adequacy of the data tended to focus on site-specific issues of the individual WSAs. The written comments and hearing transcripts requiring a response are reprinted in the Final EIS.

Arizona Mohave

The Apache Box WSA, located in southwestern New Mexico, was 1 of 15 WSAs administered by BLM in Arizona which were dropped from study by a decision of the Secretary of the Interior in 1982. As a result of a court decision in 1985 (Sierra Club vs. Watt), these 15 areas were reinstated in the study process. The Arizona Mohave Wilderness EIS was prepared by the Phoenix and Safford Districts in Arizona. The Districts invited public participation throughout the review process.

In September 1986, letters announcing the start of the wilderness study were mailed to 2,500 individuals, groups, local and State government, other Federal agencies, and Indian tribal leaders. In October 1986, meetings were held in Kingman and Phoenix, Arizona.

The public comment period on the Draft EIS was held from October 9, 1987 to January 8, 1988. More than 1,300 copies of the Draft EIS were distributed. News releases provided information about obtaining copies of the Draft EIS and time, date, and locations of the scheduled public hearings.

BLM held public hearings in Clifton, Kingman, and Phoenix, Arizona, and Silver City, New Mexico. The written comments and hearing transcripts requiring a response are reprinted in the Final EIS. No elected officials, Indian tribes, or local agencies submitted written comments.

During the public comment period on the *Arizona Mohave Draft Wilderness Environmental Impact Statement* (1987), BLM received comments from 10 individuals who specifically addressed the Apache Box WSA. Five commenters supported wilderness designation, four opposed it, and one offered no position. Those supporting wilderness designation cited the area's outstanding scenery, protection of cultural resources, and proximity of the Hell's Hole WSA. Those opposing wilderness designation cited the area's small size and potential for conflict with mineral exploration and development as supporting reasons.

Safford District

The Peloncillo Mountains WSA straddles the New Mexico/Arizona state line. The WSA totals 12,317 acres of land, with 4,061 acres in New Mexico and the remainder in Arizona. The Peloncillo Mountains WSA was studied as part of Arizona's Safford District Wilderness EIS. Public comments were gathered through workshops in Safford, Tucson, and Globe, Arizona; personal contacts; news releases; and mailings to agencies, individuals, businesses, and other groups on the Safford District wilderness mailing list. The major emphasis of this public involvement process was to identify issues for the EIS and the development of alternatives.

The Draft EIS was filed with the Environmental Protection Agency on May 27, 1983, and the public comment period ended on August 31, 1983. There were 950 copies of the Draft EIS distributed to the public. News releases were issued identifying the

review period, when and where public hearings would be held, and how to obtain copies of the document.

Public hearings were held in Safford, Tucson, and Phoenix, Arizona, and in Lordsburg, New Mexico. Testimony at the hearings was presented by 31 people. A total of 269 inputs were received from various agencies, organizations, businesses, and individuals.

A total of 12 individuals and organizations commented specifically on the Peloncillo Mountains WSA. Eight favored wilderness designation, two opposed it and two offered no position. Those favoring designation cited the area's rugged terrain, outstanding scenery and opportunities for solitude, the naturalness of the area, and the raptor breeding habitat in the mountains. Those opposing designation felt that the wilderness analysis report (WAR) was deficient in minerals information and that the boundary conflicted with a planned utility corridor. Commenters also offered additional information concerning the rock rattlesnake and coatimundi in the WSA.

In November of 1990, a Statewide wilderness bill was passed which designated 19,650 acres as wilderness. This new wilderness area encompasses all of the Peloncillo Mountain WSA in Arizona. The portion in New Mexico remains in WSA status and is still being recommended as nonsuitable.

Coronado National Forest Plan

The Guadalupe Canyon ISA was studied for wilderness suitability in a joint study with the Coronado National Forest Bunk Robinson WSA and the BLM Baker Canyon WSA managed by the Safford District, Arizona. Lead agency for the planning effort was the U.S. Forest Service. The public involvement process for the Coronado National Forest was begun in March 1978. Organizations were used as primary means of contacting people to invite them to get involved in Forest Service planning. A letter inviting participation was sent to 1,002 organizations in southeastern Arizona. Ten percent of the groups responded. Individuals who held Forest Service permits for grazing, special uses, etc., were added to the mailing lists along with individuals solicited through organization newsletter articles, newspaper stories, radio, public service advertisements, and organization mailing lists, for a total of 3,200 people and organizations. An invitation to 12 public workshops held throughout southeastern Arizona during the Spring of 1978 was sent to names on the mailing list. The invitations included a response form enabling individuals unable to attend the meetings to make comments. A total of 253 response forms and 745 letters were received. Almost 500 people attended the workshops.

In December 1982, the Coronado National Forest Plan and Draft EIS were released for public review. Over 2,500 responses were received during the development and review of these documents. Direction from the Secretary of Agriculture prompted another public involvement phase relative to the wilderness issue and the re-evaluation of roadless areas. During August 1983, Statewide and local meetings were held.

During the public comment period on the *Draft Environmental Impact Statement, Proposed Coronado National Forest Plan* (Forest Service 1988), numerous comments were received concerning wilderness designation of the Bunk Robinson/Guadalupe Canyon/Baker Canyon complex. The Forest Service did not summarize comments except to say that the local residents opposed wilderness designation while commenters from over 100 miles away favored wilderness designation.

While not included in the *New Mexico Statewide Wilderness Study: Revised Draft Environmental Impact Statement* (BLM 1986), specific comments on the Guadalupe Canyon ISA were made by 22 commenters. All 22 commenters were in favor of wilderness designation.

Reasons supporting the Guadalupe Canyon area as wilderness included: value of wilderness values outweighs value of other resources; Nation needs more wilderness; designation will not adversely impact other resources; area favored, but boundaries should be enlarged; high scenic values; value of wilderness was not adequately considered; need more ecological diversity in the Wilderness system; will protect cultural values; will protect resources from overuse; area meets the wilderness criteria (naturalness, solitude, and size); and complements adjacent designated wilderness areas.

Lincoln National Forest Plan

Following reinstatement of Devil's Den Canyon, McKittrick Canyon, and Lonesome Ridge WSAs, an interagency agreement between BLM and the U.S. Forest Service was approved to jointly study these WSAs in conjunction with study of the Guadalupe Escarpment WSA. The joint study was conducted as part of the Lincoln National Forest Plan and the Final EIS was released on October 31, 1986. Lead agency on the planning effort was the U.S. Forest Service.

Public involvement activities for the Lincoln National Forest Plan and RMP were begun in January, 1980. A mailing list was developed from lists of persons and organizations known to have visited, used, or been interested in the Forest, including: fuelwood cutters, both commercial and private; grazing permittees; recreation users (cyclists, hikers, ORV users); Christmas tree cutters, the news media; schools, colleges, and universities; Federal, State, and local agencies; and local industries. On March 15, 1980, the list of planning issues, concerns, and opportunities was sent to 3,400 people on the mailing list, with a response deadline of April 15, 1980. Approximately 2,800 comments from 432 respondents were received and analyzed. In May 1980, meetings were held in Roswell, Carlsbad, Ruidoso, Weed, Alamagordo, Las Cruces, Cloudcroft, and Mayhill, New Mexico, and El Paso, Texas. Approximately 200 people attended these meetings.

The Proposed Lincoln National Forest Plan and EIS were released for review on June 29, 1985. Approximately 500 packets consisting of the Plan, the EIS, and a summary of the EIS were mailed, and an additional 250 summaries were sent to people who asked not to receive the complete packet. About 125 additional packets were distributed during and after the comment period.

The formal comment period ended on October 18, 1985, although comments received to April 1, 1986, were considered. Eighty-two letters were received and their contents analyzed.

Wilderness designation for this area was supported to limit impacts from mineral development activities and to preserve part of the geologic integrity of the Capitan Reef Formation because of the WSA's proximity to existing wilderness in the Guadalupe Mountains National Park. Three general comment letters were received that stated opposition to any new wilderness designations in southern New Mexico. Reasons for opposition were hardship on local ranchers, reduced utilization of areas, and loss of motorized access for camping, wood collecting, and sightseeing.

WILDERNESS AREAS IN NEW MEXICO

As of January 1, 1990, Congress had designated 90.8 million acres of Federal land as wilderness. More than 60 percent of the Nation's designated wilderness (56.5 million acres) is in Alaska, and includes most of the wilderness areas managed by the National Park Service and the U.S. Fish and Wildlife Service. More than a third of the National Wilderness Preservation System is managed by the U.S. Forest Service, including 80 percent of the wilderness area outside Alaska.

Approximately 1.6 million acres, or 1.77 percent of the Nation's designated wilderness, is in New Mexico. In the neighboring states of Arizona, Colorado, and Texas, there are approximately 4.8 million acres of designated wilderness. Within this four State area, there are a total of 6.4 million acres of desig-

nated wilderness or approximately 7 percent of the Nation's designated wilderness. (Table 3 identifies the Federal designated wilderness acreage by agency for New Mexico and the neighboring States of Arizona, Colorado, and Texas.)

Designated and administratively endorsed wilderness areas are distributed throughout New Mexico. The four wilderness management agencies in the State (BLM, National Park Service, U.S. Fish and Wildlife Service, and U.S. Forest Service) have administrative responsibility for approximately 22.6 million acres in New Mexico. (Table 4 identifies the total State acreage, total Federal acreage, and area managed by Federal agencies in New Mexico, Arizona, Colorado, and Texas.) In New Mexico, there are approximately 1.1 million acres of Federal land being considered for wilderness designation. The vast majority of this acreage (82 percent) is administered by the BLM and included in this report to Congress. The New Mexico BLM acreage represents 1 percent of the U.S. total Federal acres under wilderness review. (Table 5 identifies the Federal acreage being considered for wilderness in New Mexico and the adjoining States of Arizona, Colorado, and Texas.)

PROPOSED WILDERNESS NAMES

The names proposed for the New Mexico wilderness areas will, in general, be the same as the name identified for the study area. However, in 7 of the 23 recommended areas, a name change is proposed.

The contiguous Ignacio Chavez, Chamisa, La Lena, and Empedrado WSAs are recommended to be units of the proposed Boca del Oso Wilderness. The existing dirt roads which separate these WSAs would remain as the boundary between the recommended units of the proposed Boca del Oso Wilderness. The Boca del Oso, or Bear's Mouth, was selected as the proposed wilderness area name because it is a dominant topographic feature which lies at the heart of these four WSAs.

The Carrizozo Lava Flow and Little Black Peak WSAs are recommended to be units of the proposed Carrizozo Malpais Wilderness. The WSAs consist of the northern third of the Carrizozo "Malpais", a Spanish word meaning "badlands." The badlands are an extensive lava flow on the valley floor west of Carrizozo, New Mexico. The name of Carrizozo Malpais is proposed to both indicate geographic location and major landform of the wilderness.

The proposed Georgia O'Keeffe Wilderness encompasses the Rio Chama WSA. The Georgia O'Keeffe Wilderness was selected as the name for this area to honor the late artist and to recognize her love for New Mexico's natural heritage and her close association with northern New Mexico. This highly scenic river corridor is adjacent to the U.S. Forest Service Chama River Canyon Wilderness, and a separate name for the BLM unit would reduce confusion between the areas.

LEGISLATIVE INITIATIVE

In May 1987, the New Mexico Congressional Delegation initiated action on development of Statewide wilderness legislation for BLM land. A letter signed by each of the Congressmen was sent to the various user groups and individuals, as well as the BLM, U.S. Forest Service, Governor, State Land Commissioner, Indian Tribal leaders, and the military, requesting comments on the BLM wilderness allocation issue. In particular, the Congressmen asked for comments on the wilderness recommendations of both the BLM and the New Mexico Wilderness Coalition. The New Mexico Wilderness Coalition, representing all the local and national conservation groups, recommended designation of 1.8 million acres as wilderness. This wilderness recommendation included all of the BLM WSAs, lands released from further wilderness review by the BLM in 1980, U.S. Forest Service land, and State trust land administered by the New Mexico Commissioner of Public Lands.

Individuals and organizations sent several hundred comments to the New Mexico Congressional Dele-

Table 3: Federal Designated Wilderness Acreage, by State and by Agency

	--- Designated Wilderness Acreage ---						--- Percent of Land Designated as Wilderness ---					
State	USFS	NPS	FWS	BLM	Total Designated	% of Total	USFS	NPS	FWS	BLM	Fed.Land	Total
Arizona	1,338,289	443,700	0	272,569	2,054,558	2.26%	11.87%	16.62%	0.00%	2.20%	6.56%	2.83%
Colorado	2,587,018	52,730	2,560	0	2,642,308	2.91%	17.91%	8.93%	4.35%	0.00%	10.99%	3.97%
New Mexico	1,388,063	56,392	39,908	128,900	1,613,263	1.77%	14.88%	16.28%	12.33%	1.00%	6.89%	2.07%
Texas	36,020	46,850	0	0	82,870	0.09%	4.78%	4.25%	0.00%	n/a	2.53%	0.05%

Table 4: Total State Acreage, Total Federal Acreage, and Area Managed by Federal Agencies

State	Total Area of State	Total Federal Acreage	Percent Federal	U.S Forest Service	National Park Service	U.S.Fish & Wildlife Service	Bureau of Land Management
Arizona	72,688,000	31,303,640	43.07%	11,278,317	2,669,823	1,574,179	12,370,514
Colorado	66,485,760	24,045,292	36.17%	14,445,192	590,268	58,865	8,277,152
New Mexico	77,766,400	23,341,695	30.02%	9,325,811	346,385	323,748	12,859,074
Texas	168,217,600	3,269,699	1.94%	753,139	1,102,434	284,626	0

Table 5: Additional Federal Acreage Being Considered for Wilderness, by State and by Agency

	Wilderness Study Acreage				
State	USFS	NPS	FWS	BLM	Total
Arizona	62,000	1,460,685	1,416,186	2,115,308	5,054,179
Colorado	397,358	399,852	0	854,784	1,651,994
New Mexico	117,530	83,726	0	925,457	1,126,713
Texas	0	623,800	0	0	623,800

gation expressing opinions on which areas should be designated wilderness and which areas should be released to other uses. In August 1987, the New Mexico Commissioner of Public Lands issued a report identifying which State trust land would be available for exchange. Wilderness recommendations developed in the consensus building process were generally based on the acquisition, through voluntary exchange, of State trust land within or adjacent to the WSA. During 1987 and 1988, discussions with interest groups and State and Federal agencies were leading to a consensus on which areas would be recommended for wilderness designation.

In 1988, the consensus building process reached an impasse on legislative language covering livestock management and Federally reserved water rights. The New Mexico grazing permittees viewed their management practices and needs as sufficiently different in BLM areas as to raise questions about the effect of wilderness designation. Specifically, the permittees were concerned about authorizations to continue using motorized equipment for inspection and maintenance of rangeland management facilities in the areas designated wilderness. Questions were raised by the New Mexico Cattle Growers' Association about the statutory and practical implications of applying the congressional guidelines *Grazing in National Forest Wilderness Areas* to BLM wilderness areas in New Mexico.

An issue of general concern throughout the West, and reflected in the consensus building process, is the effect of wilderness designation on existing and future water rights and uses. The primary issue relates to the protection of water flowing through a wilderness. In New Mexico, only the Rio Chama WSA, San Antonio WSA, and the Gila Lower Box WSA contain perennial streams. As of 1988, all but three western states had enacted legislation recognizing instream flows. Two of the three (Arizona and Nevada) recognize the right to appropriate water for instream flow purposes. Only New Mexico has no provision to protect instream flows. An instream flow water right is a legal entitlement to a specific amount of water in a channel at a given place and time. The national debate has prevented many wilderness proposals from moving forward. The bottleneck is primarily an issue of Federal reserved water rights vs. state water rights. The issue is currently being debated in the courts.

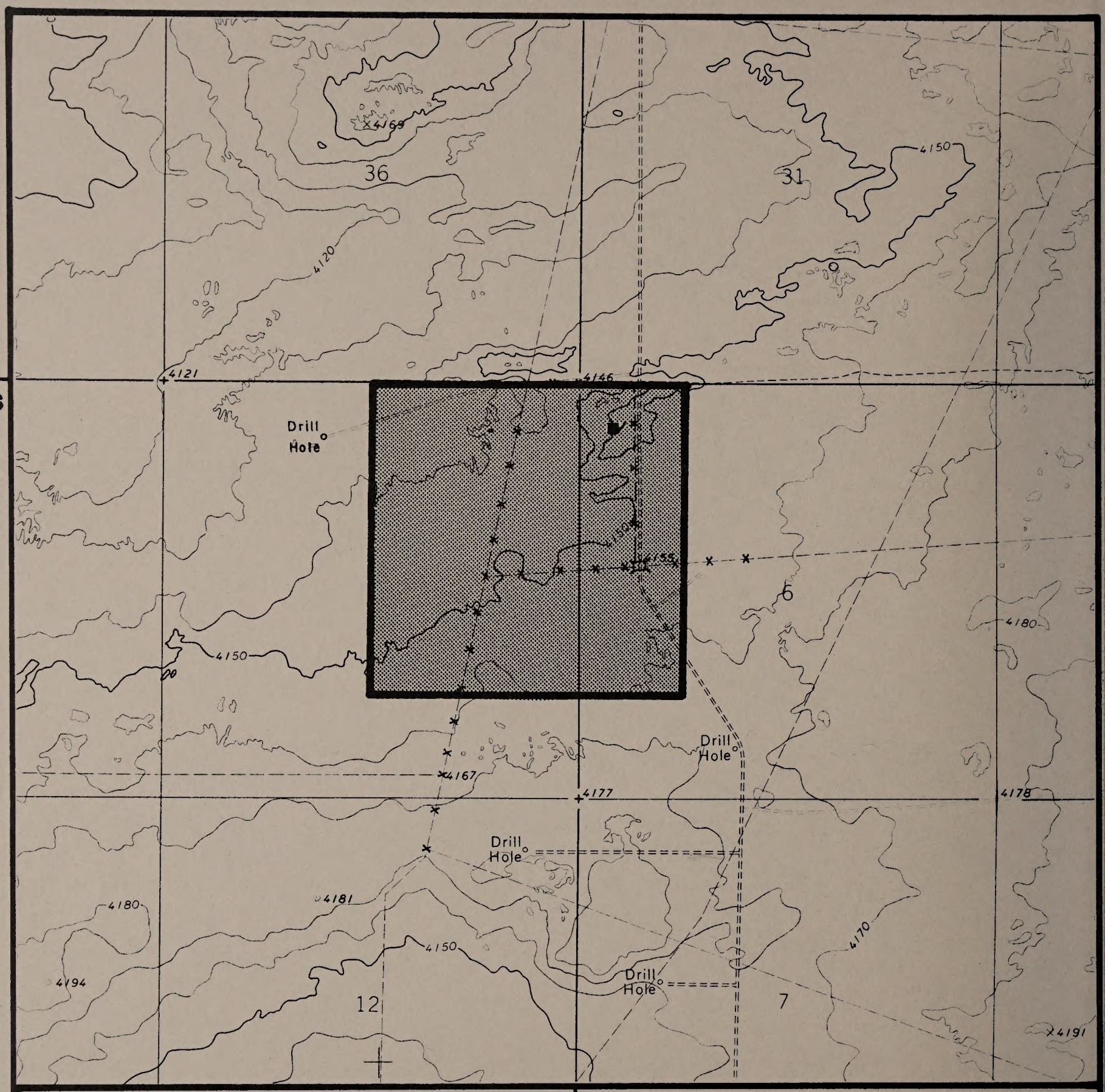
On May 23, 1989, Senator Domenici and the University of New Mexico (UNM) sponsored a land forum to address the issues of livestock grazing in wilderness and Federally reserved water rights. Following the debate on the issues, Senator Domenici announced that he was again optimistic that the out-

standing issues could be resolved. The Senator then asked the UNM's Natural Resources Center to serve as the focal point in bringing the various groups, the State Engineer, and the BLM together to develop the necessary legislative language. This working group met for the first time in August 1989.

On October 3, 1989, the New Mexico Congressional Delegation met and could not reach consensus on any aspect of the BLM wilderness bill. The proposal to use the working group in developing legislative language was thus put on hold until at least 1991.

APPENDIX I

MAP 1



RECOMMENDED FOR WILDERNESS (None)

RECOMMENDED FOR NONWILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILD. (None)

SPLIT ESTATE (None)

STATE (None)

PRIVATE (None)

N

0 1/2 1 MILE

SCALE

Mathers Proposal

NM-ISA-003

April 1990

APPENDIX 1
MATHERS INSTANT STUDY AREA

THE STUDY AREA - 362 Acres

The Mathers Instant Study Area (ISA), NM-ISA-003, is located in eastern Chaves County, New Mexico, in a region generally referred to as the Querecho Plains. The ISA includes 362 acres of Bureau of Land Management (BLM) land. (See Table 1 for land status and acreage summary of the study area.) The closest major population center is Roswell, New Mexico, which is located 40 miles west of Mathers Natural Area.

The ISA is near the northern end of a 6-10 mile wide belt of stabilized and active sand dunes which parallels the western escarpment of the Llano Estacado (Staked Plains). These sands are primarily stabilized by shinnery oak, a low growing (1-3 foot) shrub member of the oak genus. The area presents a mixture of biological features due to its location in the overlap zone of the High Plains and the Chihuahuan Desert. Elevation ranges from approximately 4,135 feet to 4,160 feet. Temperature extremes vary from -35 degrees F. to 116 degrees F. and precipitation averages less than 16 inches per year. Annual evaporation averages 71-72 inches.

Feasibility determinations for establishing this area as a vegetative natural area were initiated during 1968. This portion of the W. E. Mathers Allotment was located in the extreme southwestern corner approximately 3 1/2 miles from the nearest water source. Due to this distance, the area had been subjected to very light grazing use and contained near-natural vegetation. It was initially proposed to construct a ten-acre cattle exclosure to preserve vegetation for comparative range studies. However, on August 27, 1970, Mathers Natural Area was designated.

The ISA was reviewed under Section 603 of the Federal Land Policy and Management Act (FLPMA). The Mathers Wilderness Suitability Report was completed in September 1979.

RECOMMENDATION AND RATIONALE

0	Acres recommended wilderness
362	Acres recommended nonwilderness

The Mathers ISA is not recommended for wilderness designation (see Map 1). This recommendation is based on the small size of the ISA, the presence of a major improved road which bisects the ISA, and the lack of outstanding opportunities for solitude or primitive and unconfined recreation.

The Mathers ISA was reviewed to determine the presence or absence of wilderness characteristics. The area was found to lack the primary characteristic of sufficient size so as to make practicable its preservation and use in an unimpaired condition. The ISA contains only 362 acres which is fragmented by a major improved road.

During this review the natural area was also determined to lack overall naturalness and outstanding opportunities for solitude or primitive and unconfined types of recreation. Approximately one-third of the ISA does exhibit ecological supplemental values specifically, near-pristine vegetation and nesting habitat for the lesser prairie chicken. No public support favoring wilderness designation of this area was received during the 45 day public review period.

The recommendation, while not environmentally preferred, will be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts. In particular, the BLM has designated the area as a Research Natural Area. Protection of natural values and wildlife habitat will be accomplished through construction of an additional one-mile temporary exclosure fence. All of the fenced area will be designated and managed as closed to off-road vehicle use.

CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

Wilderness Characteristics

Naturalness

The ISA is bisected by a major maintained road near the eastern boundary. In addition, an approximately 95 acre portion of the area is enclosed by a barbed wire fence. The west side of this

Table 1: Land Status and Acreage Summary

Within Wilderness Study Area	Acres
BLM (Surface and Subsurface)	362
Split-Estate (BLM Surface Only)	0
Inholdings	0
Total	362
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	0
BLM (Outside WSA)	0
Split-Estate (Within WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings	0
Within the Area Not Recommended for Wilderness	
BLM (Surface and Subsurface)	362
Split-estate (BLM Surface Only)	0
Total BLM Land Not Recommended for Wilderness	362
Inholdings	0

enclosure fence bisects the designated area in a north-south orientation. A wildlife watering device in the north-east portion of the enclosed area is highly visible due to the size of the above ground structure. The vegetation within the fenced enclosure is in near pristine condition representative of the shinnery oak-sand prairie vegetation type.

Solitude

The ISA lacks outstanding opportunities for solitude. Maintained roads and fences divide the ISA into five units of land which vary in size from approximately 9 acres to 146 acres. With this fragmented pattern it would be difficult for a visitor to obtain a feeling of solitude. The lack of topographic and vegetative screening in this area also limits the opportunity for solitude.

Primitive and Unconfined Recreation

The ISA lacks outstanding opportunities for primitive and unconfined recreation. Recreational activities which could occur in this area include hiking, hunting, bird watching and sightseeing for botanical features. Horseback riding could occur in smaller areas, but this activity would be confined by the numerous fences. Unconfined recreational activities which could occur in the designated area are not of outstanding diversity or quality when compared with adjacent areas.

Special Features

The vegetation in this area is presently near climax condition. It has historically received very limited grazing use prior to designation as a natural area, and the 95-acre fenced enclosure contains the most pristine vegetation. A 73-acre tract directly west of the present enclosure is proposed for protection by construction of a new fence to provide stable nesting habitat for the lesser prairie chicken. The fenced area has been determined to be critical nesting habitat for the lesser prairie chicken. Scientific and educational values of the natural vegetation and associated wildlife are deemed to be highly significant.

Summary of WSA-Specific Public Comments

Wilderness Inventory Comments

On March 12, 1979, a 45-day public review period was initiated to receive comments on proposed BLM conclusions for the Mathers ISA. The area was recommended as nonsuitable for wilderness designation due to the absence of key characteristics of size, and opportunities for solitude or primitive and unconfined recreation.

A series of three open-house meetings were held in Hobbs, Carlsbad and Roswell, New Mexico, on March 13, 14 and 15, 1979. On May 22, 23 and 24, 1979, workshops were held at each of the above locations. At each of these meetings, the proposed nonsuitable recommendation for the Mathers ISA was prominently displayed. In excess of 114 people attended the six meetings. Printed information and large scale maps were also mailed to numerous individuals, groups and agencies in order to attain the greatest possible public exposure.

Two contiguous roadless areas were inventoried by BLM during February 1978. Based on this initial inventory it was determined that wilderness characteristics were clearly and obviously lacking. This proposed decision was released for public review on March 12, 1979, concurrent with the public review period for the Mathers ISA. On July 9, 1979, this decision became final and the roadless areas were dropped from further wilderness consideration.

Over one thousand letters and oral comments were received by BLM offices in New Mexico as a result of the previously mentioned statewide public participation efforts. Comments were solicited on BLM recommendations for both initial wilderness inventory, and for previously designated natural areas or ISAs. During the public review period for the ISAs,

which ended on April 25, 1979, only one comment was received on the Mathers ISA. This comment agreed with the proposed nonsuitable recommendation. Two written comments concerning the natural area or contiguous roadless lands were received by BLM prior to the formal public comment period in 1979. One person stated that one of the contiguous roadless areas had wilderness potential and should be intensively inventoried for wilderness characteristics. Another person who had visited the ISA expressed doubt as to any wilderness potential.

The designated acreage is surrounded entirely by BLM and State lands. Contiguous Federal lands were formally determined to not have wilderness values and were excluded from further consideration during the statewide initial inventory process. No public support for wilderness management of the area was received during the forty-five day public comment period. One written comment was received which favored continued management as a natural area. One letter was received prior to the public comment period which favored intensive inventory of contiguous lands, but no reference was made to the presence of wilderness characteristics in the ISA or the surrounding lands.

APPENDIX 2

APPENDIX 2
MINERAL RESOURCE POTENTIAL SUMMARY

Area Name	Suitable Acres	Mineral Resource Potential
Aden Lava Flow	25,287	Entire WSA has a low mineral and energy resource occurrence potential.
Ah-shi-sle-pah	0	Identified coal reserves of 399.4 million tons. USGS/BM **upgraded** BLM's rating for oil and gas occurrence potential from low to high.
Alamo Hueco Mountains	0	USGS/BM **upgraded** BLM's rating for oil and gas occurrence potential from low to moderate.
Antelope	0	USGS/BM **upgraded** BLM's rating for coal from low to moderate.
Big Hatchet Mountains	45,374	USGS/BM identified two small, subeconomic resources of lead, silver, and zinc in the southern part of the WSA. USGS/BM **lowered** BLM's rating for oil and gas from moderate (11,700 acres) to low (entire area).
Blue Creek	0	USGS/BM **upgraded** BLM's rating for manganese from low to moderate.
Brokeoff Mountains	0	USGS/BM identified dolomite, suitable for use as agricultural lime and as refractory material, in the WSA. Entire WSA has a low mineral and energy resource occurrence potential.
Cabezon	8,159	USGS/BM **lowered** BLM's rating for oil and gas from moderate to low.
Carrizozo Lava Flow/ Little Black Peak	25,084	The WSA's have a low mineral and energy resource occurrence potential.
Cedar Mountains	0	USGS/BM considered the mineral and energy resource occurrence potential as unknown and recommended additional study.

Mineral Resource Potential Summary

Area Name	Suitable Acres	Mineral Resource Potential
Chamisa	15,758	Identified subeconomic measured resource of 2.2 million tons and an indicated resource of 4.7 million tons of coal at a depth of less than 500 feet. Entire WSA has a moderate occurrence potential for oil and gas.
Continental Divide	37,599	Entire WSA has a moderate occurrence potential for oil and gas. USGS/BM **lowered** rating for tin from moderate to low.
Cooke's Range	0	Moderate occurrence potential for manganese in southeastern part of WSA. Moderate occurrence potential for fluorite in most of WSA. High occurrence potential for lead, zinc, silver, and copper in northern part of WSA and moderate occurrence potential in central part of WSA.
Cowboy Spring	6,699	Entire WSA has a low mineral and energy resource occurrence potential.
Culp Canyon	0	USGS/BM **lowered** BLM's rating for oil and gas from moderate to low.
Devil's Backbone	0	Entire WSA has a moderate occurrence potential for lead, zinc, copper, molybdenum, and gold. USGS/BM **upgraded** BLM's rating for manganese from low to moderate.
Devil's Den Canyon	0	Entire WSA has a moderate occurrence potential for copper, lead, and zinc.
Eagle Peak	0	USGS/BM **upgraded** BLM's rating for uranium from moderate (8,000 acres) to moderate (entire WSA). WSA is included in Salt Lake Coal Field. The Salt Lake Coal Field is estimated to contain 327 million tons of coal.

Area Name	Suitable Acres	Mineral Resource Potential
Empedrado	9,007	Identified measured resource of 3.9 million tons and an indicated resource of 9.8 million tons of coal at a depth of less than 500 feet. The coal is marginally economic only in conjunction with coal on adjacent lands outside the WSA. Entire WSA has a moderate occurrence potential for oil and gas.
Florida Mountains	0	High occurrence potential for gold, barite, silver, copper, lead, zinc and fluorite in east-central part of WSA and in 2 locations in northeast part of WSA. Remainder of WSA has a moderate occurrence potential for gold, barite, silver, copper, lead, zinc, and fluorite. USGS/BM **upgraded** BLM's rating for manganese from moderate (1,300 acres) to high (1,300 acres).
Gila Lower Box	5,835	USGS/BM **upgraded** BLM's rating for manganese from low to high in eastern part of WSA and from low to moderate in remainder of WSA.
Horse Mountain	4,432	Entire WSA has a moderate occurrence potential for oil and gas. USGS/BM **lowered** BLM's rating for copper, gold, iron, manganese, molybdenum, silver, tin, uranium, and zinc from moderate to low.
Ignacio Chavez	33,609	Measured resource of 19.2 million tons and an indicated resource of 63 million tons of coal at a depth of less than 500 feet. USGS/BM state that excessive amounts of overburden and the thin, lenticular character of coal beds make development of the coal unlikely. Entire WSA has a moderate occurrence potential for oil and gas.
Jornada del Muerto	31,147	USGS/BM **lowered** BLM's rating for oil and gas from moderate to low.

Mineral Resource Potential Summary

Area Name	Suitable Acres	Mineral Resource Potential
La Lena	10,438	Measured resource of 17 million tons and an indicated resource of 23.4 million tons of coal at a depth of less than 500 feet. USGS/BM state the coal could be marginally economic when combined with coal on adjacent lands. USGS/BM **lowered** BLM's rating for oil and gas from high (6,037 acres) to moderate (entire area).
Las Uvas Mountains	0	The entire WSA has a low mineral and energy resource occurrence potential.
Lonesome Ridge	0	Identifed limestone resource. Moderate occurrence potential for oil and gas. Moderate occurrence potential for copper, lead, and zinc.
Manzano	881	USGS/BM **lowered** BLM's rating for oil and gas from moderate to low.
McKittrick Canyon	0	Moderate occurrence potential for oil and gas, copper, lead, and zinc.
Mesita Blanca	0	WSA is included in Salt Lake Coal Field. The Salt Lake Coal Field is estimated to contain 327 million tons of coal.
Mudgetts	0	Entire WSA has a high occurrence potential for oil and gas and a moderate occurrence potential for copper, lead, and zinc.
Ojito	10,903	Inferred subeconomic resource of 6 million tons of gypsum. Moderate occurrence potential for uranium. However, USGS/BM believes the grade of the uranium is far below that of economic deposits. USGS/BM **lowered** BLM's rating for oil and gas from moderate to low.
Organ Mountains	7,283	High occurrence potential for copper, molybdenum, gold, and silver in northern part of WSA. Moderate occurrence potential for copper, silver, lead, zinc, and fluorite along western edge of WSA.
Petaca Pinta	10,631	USGS/BM **lowered** BLM's rating for oil and gas from moderate to low.

Area Name	Suitable Acres	Mineral Resource Potential
Presilla	0	Moderate occurrence potential for geothermal resources. USGS/BM **upgraded** BLM's rating for fluorite, barite, and copper from moderate to high in the north-central part of WSA. USGS/BM **lowered** BLM's rating for uranium from moderate to low.
Rio Chama	5,918	The entire WSA has low occurrence potential for mineral and energy resources.
Robledo Mountains	0	Identified deposits of limestone in the southeastern part of WSA.
Sabinoso	0	The entire WSA has a moderate occurrence potential for uranium.
San Antonio	0	The entire WSA has low occurrence potential for mineral and energy resources.
Sierra de las Canas	12,798	Approximately 50,000 short tons of gypsum occur in the southeast corner of the WSA. USGS/BM **lowered** BLM's ratings for geothermal, copper, barite, fluorspar, lead, and zinc from moderate to low.
Sierra Ladrones	31,804	Moderate occurrence potential for gold and silver in northeastern part of WSA. Moderate occurrence potential for tungsten, bismuth, molybdenum, lead, and tin in the northern part of WSA. Moderate occurrence potential for fluorite in eastern part of WSA. USGS/BM reduced the size of the area with moderate occurrence potential for manganese, cobalt, and nickel from 8,100 acres to two mine locations in southern part of WSA.
Stallion	0	USGS/BM rated the occurrence potential for rare-earth elements as high in the northeast part of the WSA. USGS/BM **upgraded** BLM's rating for gypsum from low to moderate.
Veranito	0	Moderate occurrence potential for geothermal resources.

Mineral Resource Potential Summary

Area Name	Suitable Acres	Mineral Resource Potential
W. Potrillo/Mt. Riley	148,540	Volcanic cinders are being mined from the Chaparal block of 6 placer claims along the southern boundary of the WSA. Cinder production from these claims is projected for the next 20 years. USGS/BM rated the remainder of the WSA as having no mineral or energy resource occurrence potential.

Source: *Mineral Summaries Bureau of Land Management Wilderness Study Areas in New Mexico*; U.S. Geological Survey and U.S. Bureau of Mines. June 1989.